

TANTALUS MILNEEDWARDSII SHUFELDT—A SYNONYM OF
THE MIOCENE PHEASANT *MIOPHASIANUS ALTUS*
(MILNE-EDWARDS)

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Tantalus milneedwardsii, a supposed species of fossil stork, was named from a tibiotarsus from the Upper Miocene (Tortonian) deposits at La Grive-Saint-Alban, Département Isère, France, by R. W. Shufeldt ("1896" = 1897). When I encountered the type element of *T. milneedwardsii* in the National Museum collections, its non-ciconiiform appearance immediately aroused me to investigate its correct placement, particularly as Shufeldt is known to have committed many errors in identifying fossils. Comparison of the specimen with a series of modern avian tibiotarsi revealed that it is from a large galliform that ultimately proves to be referable to the species *Miophasianus altus* (Milne-Edwards).

TAXONOMIC HISTORY

The type and only specimen of *Tantalus milneedwardsii* is the proximal end of a right tibiotarsus (USNM 2168) of which Shufeldt (1897:513) said: "it was a *Tantalus* of almost precisely the same size as *T. loculator* [= *Mycteria americana*], and its tibio-tarsus presents characters agreeing very closely with that species. The agreement is so close that it would appear unnecessary to remove it from that genus. . . ." This nebulous statement, plus a single line drawing, is all that constitutes the original "description" of the species. Subsequently, the species has been listed variously as: *Tantalus Milne-Edwardsi* (Lambrecht, "1917" = 1918; 1921); *Pseudotantalus milne-edwardsi* (Sharpe, 1899); *Pseudotantalus Milne-Edwardsi* (Paris, 1912; Lambrecht, 1933); *Pseudotantalus Milne Edwardsi* (Ennouchi, 1930); and *Ibis milne-edwardsi* (Brodkorb, 1963). (Modern rules of nomenclature unfortunately require deletion of the hyphen.)

COMPARISONS AND DISCUSSION

In my comparisons of the type of *Tantalus milneedwardsii*, I find that it differs from storks and agrees with Galliformes in the broader and more oval shaft, the more expanded proximal end (Fig. 1a, b), the greater lateral projection of the much heavier outer cnemial crest (Fig. 1a, b), the more lateral displacement of the inner cnemial crest and the intermuscular line descending from it (Fig. 1a), and the presence of a well-developed, longitudinal nutrient foramen posterior to the distal end of the fibular crest (Fig. 1b, c). In proximal view (Fig. 1e) it differs vastly from the storks, in which

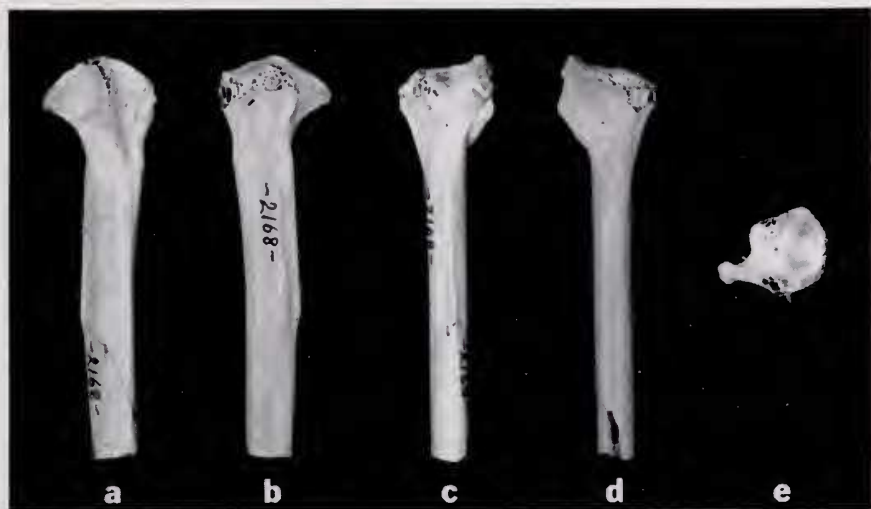


FIG. 1. Holotype tibiotarsus (USNM 2168) of *Tantalus milneedwardsii* Shufeldt = *Miophasianus altus* (Milne-Edwards). a, anterior view (the large chip from the end of the shaft had not been replaced at the time Shufeldt illustrated this specimen). b, posterior view. c, lateral view. d, medial view. e, proximal view. All figures $\frac{2}{3}$ natural size.

the cnemial crests are distinctly separated from the articular surfaces by a somewhat constricted pedicel. The fossil is clearly galliform and more particularly, a phasianid (*sensu lato*).

The deposits at Grive-Saint-Alban have produced ten named species of Galliformes, as well as other avian fossils. As given in Brodkorb (1964) the Galliformes are: *Palaeoperdix edwardsi* (Depéret), *Miophasianus medius* (Milne-Edwards), *M. altus* (Milne-Edwards), *M. maximus* (Lydekker), *Proalector miocaenus* (Gaillard), *P. gaillardi* (Ennouchi), *Palaeocryptonyx grivensis* Ennouchi, *Plioperdix grivensis* (Lydekker), *P. depereti* (Ennouchi), *P. joleaudi* (Ennouchi). Of these, all but *Miophasianus altus* are smaller forms than is indicated by the type of *Tantalus milneedwardsii*.

Phasianus altus Milne-Edwards (1869), along with several other forms, was placed in a new genus, *Miophasianus*, by Lambrecht (1933). Later, *M. altus* was designated as the type species of the genus (Brodkorb, 1952). *M. altus* was described from a distal end of a tibiotarsus, a phalanx of the manus, and a proximal end of a tarsometatarsus from the Upper Miocene at Sansan, Département Gers, France. Milne-Edwards (1869) originally characterized it as being a large pheasant about the size of *Crossoptilon auritum*. Depéret (1887) assigned a proximal end of a femur, a proximal end of a tarsometatarsus, three proximal portions of carpometacarpi, and two distal ends of

tibiotarsi from the Grive-Saint-Alban deposits to *M. altus*, stating that the tibiotarsi in no way differed from the holotype tibiotarsus from Sansan. Lydekker (1893) described and figured a proximal end of a tarsometatarsus, a distal end of a humerus, and a complete ulna and carpometacarpus of *M. altus*, also from Grive-Saint-Alban. More recently, Ballman (1969) described the distal end of the femur and other elements from Grive-Saint-Alban, including the distal end of a tibiotarsus which he, too, agreed was identical to the type of *M. altus*. Elsewhere in Europe, a portion of a tibiotarsus from the Upper Miocene of Switzerland (Lydekker, 1891) and wing elements and another distal portion of a tibiotarsus from the Upper Miocene of Germany (Lambrecht, 1921) have been assigned to this species.

The type specimen of *Tantalus milneedwardsii* is, as mentioned, a proximal end of a tibiotarsus. Only the distal end of this element of *Miophasianus altus* has been identified, but as illustrated by Milne-Edwards (1869), it agrees perfectly in size with the type of *Tantalus milneedwardsii*. The measurements of the type of *T. milneedwardsii* are: overall length of fragment 81.6 mm; length of fibular crest 35.8; width of shaft below fibular crest 10.3; depth of shaft below fibular crest 7.9. This suggests a bird larger than *Crosoptilon* but smaller than *Pavo*, i.e. *M. altus*. As no basis exists for assuming that there were two galliform species of this size in the Grive-Saint-Alban deposits, I regard *Tantalus milneedwardsii* Shufeldt 1897 as a synonym of *Phasianus altus* Milne-Edwards 1869.

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LITERATURE CITED

- BALLMAN, P. 1969. Les oiseaux miocènes de La Grive-Saint-Alban (Isère). *Geobios*, 2:157-204.
- BRODKORB, P. 1952. The types of Lambrecht's fossil bird genera. *Condor*, 54:174-175.
- BRODKORB, P. 1953. Catalogue of fossil birds: Part 1 (Archaeopterygiformes through Ardeiformes). *Bull. Florida State Mus., Biol. Sci.*, 7:179-293.
- BRODKORB, P. 1954. Catalogue of fossil birds: Part 2 (Anseriformes through Galliformes). *Bull. Florida State Mus., Biol. Sci.*, 8:195-335.
- DEFÉRET, C. 1887. Recherches sur la succession des faunes de vertébrés miocènes de la Vallée du Rhone. *Arch. Mus. Hist. Nat. Lyon*, 4:45-313.
- ENNOUCHI, E. 1930. Contribution à l'étude de la faune du Tortonien de La Grive-Saint-Alban (Isère). *Revision generale.—Étude ornithologique*. Presses Modernes, Paris.
- LAMBRECHT, K. "1917" = 1918. Die Ausbildung und Geschichte der europäischen Vogelwelt. *Aquila*, 24:209-221.
- LAMBRECHT, K. 1921. *Fossilium Catalogus*, vol. 1: Animalia, pars 12 Aves. W. Junk, Berlin.

- LAMBRECHT, K. 1933. *Handbuch der Palaeornithologie*. Gebrüder Borntraeger, Berlin.
- LYDEKKER, R. 1891. *Catalogue of the fossil birds in the British Museum (Natural History)*. British Museum, London.
- LYDEKKER, R. 1893. On some bird-bones from the Miocene of Grive-St.-Alban, Department of Isère, France. *Proc. Zool. Soc. London*:517-522.
- MILNE-EDWARDS, A. 1869. *Recherches anatomiques et paléontologiques pour servir à l'histoire des oiseaux fossiles de la France*. Vol. 2. Victor Masson, Paris.
- PARIS, P. 1912. Oiseaux fossiles de France. *Rev. Franc. Ornithol.*, 2:283-298.
- SHARPE, R. B. 1899. A hand-list of the genera and species of birds. Vol. 1. British Museum, London.
- SHUFELDT, R. W. "1896" = 1897. Fossil bones of birds and mammals from Grotto Pietro Tamponi and Grive-St. Alban. *Proc. Acad. Nat. Sci. Philadelphia*:507-516.
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